



**MARINE
ENVIRONMENTAL
PARTNERS, INC.**



MARISANTM

**BALLAST WATER
TREATMENT SYSTEMS**

BALLAST WATER FACTS

- INTERNATIONAL AND NATIONAL REGIMES REQUIRE ADVANCED BALLAST WATER MANAGEMENT PRACTICES
- BALLAST WATER TREATMENT IS THE WIDELY ACCEPTED SOLUTION
- NON-INDIGENOUS SPECIES ARE ONE OF THE FOUR GREATEST THREATS TO THE WORLD'S OCEANS
- SHIPPING RELOCATES 2 1/2 TRILLION GALLONS OF WATER PER YEAR AS BALLAST

MARISANTM

TECHNOLOGY

- PRE-FILTRATION / SEPARATION
- E-CELLTM
- IONZTM
- SHEAR MIX MANIFOLD
- CONTROLS & AUTOMATION

THE MARISANTM SOLUTION

- NON-CHEMICAL TREATMENT
- SINGLE PASS FLOW THROUGH METHOD
- PHYSICAL SEPARATION / FILTRATION DURING BALLASTING OPERATIONS
- FILTRATION AND TREATMENT DURING DISCHARGE
- MEETS ALL PROPOSED REGULATORY CRITERIA

PRE-FILTRATION

- SELF-CLEANING
- BACKFLUSHES AT FULL FLOW
- REQUIRES NO BACKFLUSH CYCLE
- FILTRATION TO 50 μ M
- STAINLESS STEEL CONSTRUCTION

MARISANTM FILTRATION



SELF-CLEANING 50 MICRON PRE-FILTER

E-CELLTM MANIFOLD

- **GENERATION OF PRIMARY DISINFECTANT**
- **UTILIZES PRINCIPLES OF ELECTRO-CHEMISTRY**
- **REQUIRES NO CHEMICAL ADDITIVES**
- **SELF MONITORING FOR PRECISE DOSING**

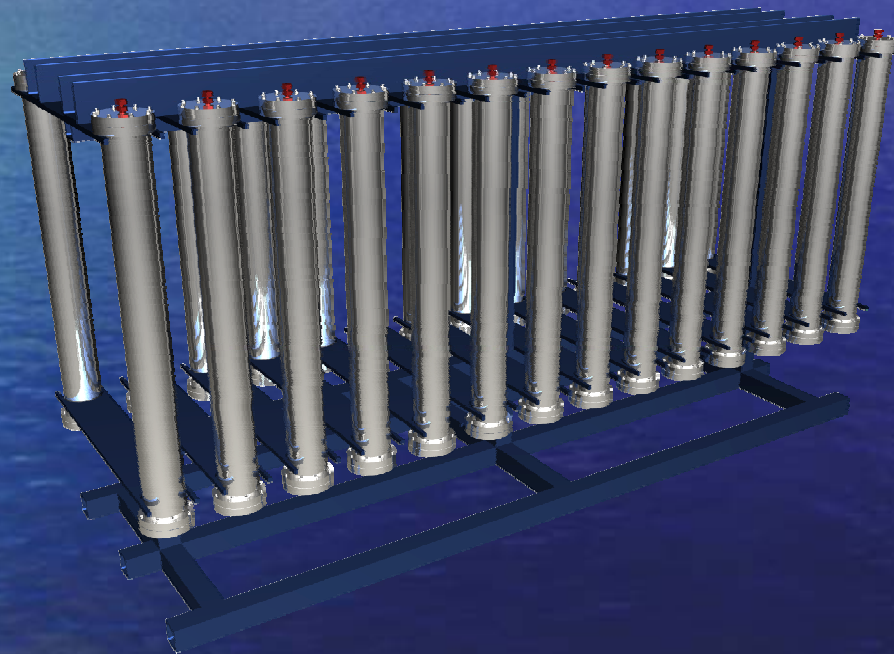
MARISANTM E-CELLTM



IONZ™

- USES AMBIENT AIR AS RAW MATERIAL
- PROVIDES ADDITIONAL DISINFECTION
- STABILIZES WATER CHEMISTRY FOR DISCHARGE
- NO OFFGASSING

MARISANTM IONZTM

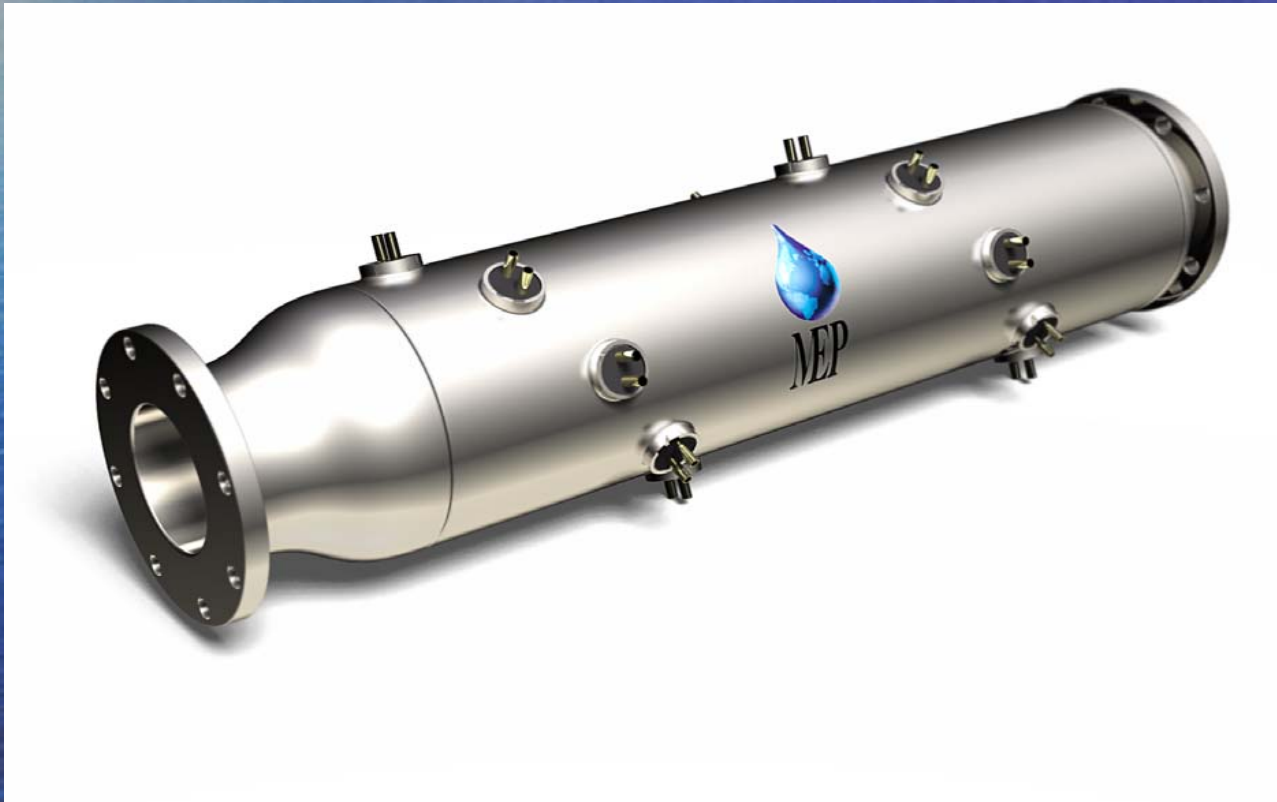


SHEAR MIX MANIFOLD

- **INTRODUCTION OF IONZTM GASES**
- **PROVIDES COMPLETE MIXING WITH BALLAST FLOW**
- **FINAL STAGE TREATMENT FOR SAFE DISCHARGE OF TREATED BALLAST**

MARISANTM

SHEAR MIX MANIFOLD



MARISANTM

POWER & CONTROLS

- FULL OPERATION VIA PLC
- TOUCH SCREEN OPERATION FOR SIMPLICITY
- BOTH LOCAL AND REMOTE TOUCH SCREENS AVAILABLE
- INDIVIDUAL COMPONENT OPERATIONS MONITORING FOR OUTPUT PERFORMANCE
- INTEGRATED DIAGNOSTIC AND REPORTING FUNCTIONS
- DATA LOGGING FOR REGULATORY REPORTING

